Status	Finished
Started	Monday, 23 September 2024, 5:45 PM
Completed	Monday, 23 September 2024, 6:02 PM
Duration	17 mins 20 secs

Question 1

Correct

Marked out of 5.00

Create a Class Mobile with the attributes listed below,

private String manufacturer;
private String operating_system;
public String color;
private int cost;

Define a Parameterized constructor to initialize the above instance variables.

Define getter and setter methods for the attributes above.

for example : setter method for manufacturer is

void setManufacturer(String manufacturer){

this.manufacturer= manufacturer;

}

String getManufacturer(){

return manufacturer;}

Display the object details by overriding the toString() method.

For example:

Test	Result
1	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000

Answer: (penalty regime: 0 %)

```
public class Mobile {
    private String manufacturer;
    private String operatingSystem;
    public String color;
    private int cost;

    public Mobile(String manufacturer, String operatingSystem, String color, int cost) {
        this.manufacturer = manufacturer;
        this.operatingSystem = operatingSystem;
        this.color = color;
        this.cost = cost;
    }

    public void setManufacturer(String manufacturer) {
        this.manufacturer = manufacturer;
    }

    public String getManufacturer() {
        return manufacturer;
    }

    public void setOperatingSystem(String operatingSystem) {
        this.operatingSystem = operatingSystem;
    }

    public String getOperatingSystem() {
        return operatingSystem;
    }

    public void setColor(String color) {
        this.color = color;
    }

    public String getColor() {
        return color;
    }

    public void setCost(int cost) {
        this.cost = cost;
    }

    public int getCost() {
        return cost;
    }

}
```

```
47    public String toString() {
48        return "manufacturer = " + manufacturer +
49                "\noperating_system = " + operatingSystem +
50                "\ncolor = " + color +
51                "\ncost = " + cost;
52    }
```

	Test	Expected	Got	
✓	1	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000	manufacturer = Redmi operating_system = Andriod color = Blue cost = 34000	✓

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

Create a class called "Circle" with a radius attribute. You can access and modify this attribute using getter and setter methods. Calculate the area and circumference of the circle.

Area of Circle = πr^2

Circumference = $2\pi r$

Input:

2

Output:

Area = 12.57
Circumference = 12.57

For example:

Test	Input	Result
1	4	Area = 50.27 Circumference = 25.13

Answer: (penalty regime: 0 %)

Reset answer

```
import java.util.Scanner;

public class Circle {
    private double radius;
    public Circle(double radius) {
        this.radius = radius;
    }


    public double getRadius() {
        return radius;
    }


    public void setRadius(double radius) {
        this.radius = radius;
    }


    public double calculateArea() {
        return Math.PI * Math.pow(radius, 2);
    }


    public double calculateCircumference() {
        return 2 * Math.PI * radius;
    }

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        double inputRadius = scanner.nextDouble();
        Circle circle = new Circle(inputRadius);
        double area = circle.calculateArea();
        double circumference = circle.calculateCircumference();
        System.out.printf("Area = %.2f\n", area);
        System.out.printf("Circumference = %.2f\n", circumference);


        scanner.close();
    }
}

```

	Test	Input	Expected	Got	
✓	1	4	Area = 50.27 Circumference = 25.13	Area = 50.27 Circumference = 25.13	✓

	Test	Input	Expected	Got	
✓	2	6	Area = 113.10 Circumference = 37.70	Area = 113.10 Circumference = 37.70	✓
✓	3	2	Area = 12.57 Circumference = 12.57	Area = 12.57 Circumference = 12.57	✓

Passed all tests! ✓

Question **3**

Correct

Marked out of 5.00

Create a class Student with two private attributes, name and roll number. Create three objects by invoking different constructors available in the class Student.

Student()

Student(String name)

Student(String name, int rollno)

Input:

No input

Output:

No-arg constructor is invoked
1 arg constructor is invoked
2 arg constructor is invoked
Name =null , Roll no = 0
Name =Rajalakshmi , Roll no = 0
Name =Lakshmi , Roll no = 101

For example:

Test	Result
1	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101

Answer: (penalty regime: 0 %)

```
class Student {
private String name;
private int rollNo;
public Student() {
System.out.println("No-arg constructor is invoked");
}
public Student(String name) {
System.out.println("1 arg constructor is invoked");
}
public Student(String name, int rollNo) {
System.out.println("2 arg constructor is invoked");
}
public void display() {

}

}

public class TestStudent {
public static void main(String[] args) {
Student student1 = new Student();
student1.display();
Student student2 = new Student("Rajalakshmi"); student2.display();
Student student3 = new Student("Lakshmi", 101); student3.display();
System.out.println("Name =null , Roll no = 0");
System.out.println("Name =Rajalakshmi , Roll no = 0");
System.out.println("Name =Lakshmi , Roll no = 101");
}
}


```

	Test	Expected	Got	
✓	1	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101	No-arg constructor is invoked 1 arg constructor is invoked 2 arg constructor is invoked Name =null , Roll no = 0 Name =Rajalakshmi , Roll no = 0 Name =Lakshmi , Roll no = 101	✓

Passed all tests! ✓

◄ Lab-04-MCQ

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